

April 29, 2016

Ms. Katharine K. Buckner
Sandhills and Pulp & Paper Permitting Section
Engineering Services Division
Bureau of Air Quality
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201-1708

Re: Resolute FP US Inc. – Catawba, SC
Request for Construction Permit Exemption
Headbox Replacement – No. 2 Paper Machine

Dear Ms. Buckner:

Resolute FP US Inc. (Resolute) plans to replace the headbox on the No. 2 paper machine to address quality issues. Resolute believes replacing the headbox qualifies for the exemption from the requirement to obtain a construction permit under the Department's August 27, 2015 guidance document "Like-for-Like replacement of equipment and control device(s) at Prevention of Significant Deterioration (PSD) Major Sources".

Background

Resolute operates a pulp and paper mill located in Catawba, South Carolina. Resolute plans to replace the headbox on the No. 2 paper machine. The new dilution control headbox will be relocated from another Resolute facility, allowing the No. 2 paper machine to produce a higher quality sheet of paper.

SC Reg. 61-62.1, Section II – Permit Requirements

South Carolina Regulation 61-2.1, Section II.A.1.a requires sources to obtain a construction permit from the Department prior to any construction, alteration, or addition to a source of air contaminants, including control devices. Section II.A.1.b allows the Department to grant permission to proceed with minor alterations or additions to sources of air contaminants without issuance of a construction permit when the Department determines the alteration or addition will not increase the quantity or alter the character of the source's emissions.

Like-for-like Replacement Exemption

Resolute believes this project qualifies for the exemption from construction permitting. This project is consistent with the exemption criteria in Section II.B.5 and the construction permit

exemption criteria in the August 27, 2015 guidance “Like-for-Like replacement of equipment and control device(s) at Prevention of Significant Deterioration (PSD) Major Sources.” Each element required by the guidance document is addressed in the following sections.

Resolute requests an exemption from the requirement to obtain a construction permit for this project. Resolute has prepared this submittal which addresses all the exemption criteria for replacement of process equipment.

Project Description

This project will replace the headbox on the No. 2 paper machine. The new dilution control headbox will be relocated from another Resolute facility, allowing the No. 2 paper machine to produce a higher quality sheet of paper. The improved quality will reduce waste and allow manufacturing higher value coated paper grades.

Description of Units Being Replaced

This project will replace the headbox on the No. 2 paper machine. The project will not change the maximum production capacity of the No. 2 paper machine.

Equipment ID Numbers

The No. 2 paper machine is Title V unit ID 06, equipment ID 4600. The headbox is one component of the No. 2 paper machine.

Description of Need to Replace Units

The condition of the existing headbox leads to poor quality due to wrinkles in the sheet, which in turn leads to cull losses (unsalable paper), excessive edge trim (waste), customer complaints (discounts and refunds), and sheet breaks (waste).

Applicable Regulations

The No. 2 paper machine is regulated by South Carolina Regulation 61-62.5, Standard No. 4, which limits particulate emissions from process industries as follows:

$$\text{PWR} = 261,600 \text{ ADTFP/yr} \times 1 \text{ year}/8,760 \text{ hr} = 29.9 \text{ tons per hour}$$

$$E = (4.1 \times P^{0.67}) = (4.1 \times (29.9)^{0.67}) = (4.1 \times 9.74) = 39.9 \text{ lb/hr}$$

The maximum uncontrolled particulate emissions from the No. 2 paper machine are 0.17 lb/hr, well below the allowable emission rate.

$$261,600 \text{ ADTFP/yr} \times 1 \text{ year}/8,760 \text{ hr} \times 0.0058 \text{ lb/ADTFP} = 0.17 \text{ lb/hr}$$

Pollutant(s) Being Controlled

There are no controls on the No. 2 paper machine headbox.

Regulations, Standards, or Requirements Triggered by the Replacement

The headbox replacement does not trigger any new regulations, standards, or requirements.

Increase in Potential to Emit (PTE), Allowable Limits, and Potential Hourly Emissions

The headbox replacement does not modify the maximum production capacity of the No. 2 paper machine. Therefore the PTE, potential hourly emissions, and allowable limits will not increase.

Production Capacity or Throughput Increases

The headbox replacement does not modify or increase the maximum production capacity of the No. 2 paper machine.

Debottlenecking and Restoring Lost Capacity

The No. 2 paper machine is currently being deliberately operated more slowly than normal to minimize the wrinkles creating the unsalable paper. The new dilution headbox will not debottleneck the No. 2 paper machine nor will it restore lost capacity, it will merely allow the existing capacity to be utilized to manufacture salable paper when operated at the normal operating rate. Table 1 shows the coated paper production rates for the previous ten years.

Table 1
Coated Paper Production

Year	Annual Coated Paper Production (ADTFP)
2007	239,727
2008	234,975
2009	220,906
2010	225,987
2011	225,445
2012	212,602
2013	213,548
2014	198,038
2015	195,888
Design Capacity	261,600

Actual-to-Actual Emissions Test

The actual-to-actual emission test was used to determine if the project results in a significant emissions increase. The emissions are calculated using air emission factors taken from the Title V air emission inventory submitted in June 2015 by SCHDEC for the No. 2 paper machine. The baseline actual emissions are calculated according to Standard No. 7, paragraph 4(b) using the average paper production for the 24-months between January 2008 and December 2009 of 227,941 ADTFP.

2008 annual production = 234,975 ADTFP

2009 annual production = 220,906 ADTFP

Baseline actual production = $(234,975 + 220,906) \div 2 = 227,941$ ADTFP/yr

Baseline PM/PM₁₀/PM_{2.5}

Title V emission factor = 0.0058 lb/ADTFP

$227,941 \text{ ADTFP/yr} \times 0.0058 \text{ lb/ADTFP} \times 1 \text{ ton}/2,000 \text{ lb} = 0.66 \text{ tpy}$

Baseline VOC (as C)

Title V emission factor = 0.17 lb/ADTFP

$227,941 \text{ ADTFP/yr} \times 0.17 \text{ lb/ADTFP} \times 1 \text{ ton}/2,000 \text{ lb} = 19.4 \text{ tpy}$

Baseline VOC (as VOC)

Title V emission factor = 0.32 lb/ADTFP

$227,941 \text{ ADTFP/yr} \times 0.32 \text{ lb/ADTFP} \times 1 \text{ ton}/2,000 \text{ lb} = 36.5 \text{ tpy}$

The projected actual emissions are calculated based on the projected paper production according to Standard No. 7, paragraph (b)(41)(i). Coated paper production is forecast to return to the grade mix prior to the headbox quality issues which developed during 2012. The projected paper production during the next five years is approximately 225,445 ADTFP, based on the 2011 paper production prior to the onset of the headbox quality issues.

5-year projected production = 225,445 ADTFP

Projected PM/PM₁₀/PM_{2.5}

Title V emission factor = 0.0058 lb/ADTFP

$225,445 \text{ ADTFP/yr} \times 0.0058 \text{ lb/ADTFP} \times 1 \text{ ton}/2,000 \text{ lb} = 0.65 \text{ tpy}$

Projected VOC (as C)

Title V emission factor = 0.17 lb/ADTFP

$225,445 \text{ ADTFP/yr} \times 0.17 \text{ lb/ADTFP} \times 1 \text{ ton}/2,000 \text{ lb} = 19.2 \text{ tpy}$

Projected VOC (as VOC)

Title V emission factor = 0.32 lb/ADTFP

$$225,445 \text{ ADTFP/yr} \times 0.32 \text{ lb/ADTFP} \times 1 \text{ ton}/2,000 \text{ lb} = 36.1 \text{ tpy}$$

The projected actual emissions are also allowed to be calculated excluding the emissions that could have been accommodated during the baseline period that are unrelated to the project according to Standard No. 7, paragraph (b)(41)(ii)(c). The emissions that could have been accommodated, and therefore may be excluded from the project actual emissions, are calculated using the highest monthly paper production during the baseline period. However, because the baseline emissions exceed the projected emissions, the emissions that could have been accommodated were not excluded.

New Source Review (NSR) Applicability Test

Resolute has applied the actual-to-projected actual applicability test from Standard No. 7(2)(c) to determine NSR applicability in Table 2. There is no emission increase predicted as a result of the headbox replacement because the coated paper production during the baseline period (225,941 ADTFP) exceeds the projected production on an annual average basis for the five year period following completion of the project (225,445 ADTFP).

Table 2
NSR Applicability Determination

Pollutant	Baseline Emissions (tpy)	Projected Emissions (tpy)	Change in Emissions (tpy)	NSR Threshold (tpy)
PM	0.66	0.65	-0.01	25
PM ₁₀	0.66	0.65	-0.01	15
PM _{2.5}	0.66	0.65	-0.01	10
VOC (as C)	19.4	19.2	-0.02	40
VOC (as VOC)	36.5	36.1	-0.04	40

Emissions Monitoring

There is no expectation of an emission increase of any NSR regulated pollutant as a result of the replacement of the No. 2 paper machine headbox. Therefore, no annual emissions monitoring is required. It should be noted SCDHEC requires the Catawba Mill to submit an annual air emission inventory that would fulfill this purpose if required.

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Summary

As outlined above, Resolute believes this project qualifies for the exemption from the requirement to obtain a construction permit under the Department's August 27, 2015 guidance document "Like-for-Like replacement of equipment and control device(s) at Prevention of Significant Deterioration (PSD) Major Sources."

If you have any questions, require further clarification, or need additional information regarding this exemption request, please do not hesitate to contact me.

Sincerely,